

~~SECRET~~November 25th, 1959COCOM Document No. 3715.21/1BCOORDINATING COMMITTEERECORD OF DISCUSSIONONITEM 1521 - AMPLIFIERS3rd and 17th November, 1959

Present: Belgium (Luxembourg), Canada, France, Germany, Italy, Japan, Netherlands, United Kingdom, United States.

References: COCOM Document 3700.1, 3715.00/1 and W.P.1521/1 and 2.

Part (a) The United Kingdom proposal to raise the frequency cut-offs to 500 Mc/s was accepted by all Delegations.

Parts (b), (d) and (e) As no proposal had been submitted for these sub-items, they remain unchanged.

New Part (e) The United States proposal to add a new paragraph in order to cover amplifiers or pre-amplifiers using paramagnetic or parametric variation techniques was studied by the Working Group (see W.P.1521/2) and accepted by all Delegations.

The new definition of Item 1521 thus read as follows:

"Amplifiers, n.e.s., as follows:

- (a) Designed to operate at frequencies in excess of 500 Mc/s;
- (b) Tuned amplifiers having a bandwidth (defined as the band of frequencies over which the power amplification does not drop to less than one-half of its maximum value) which exceeds 10 Mc/s or 10 per cent of the mean frequency, whichever is less. (The mean frequency is defined as the arithmetic mean between the frequencies at which the power amplification is one-half of its maximum value);
- (c) Untuned amplifiers having a bandwidth, as defined in sub-item (b) above, which exceeds 10 Mc/s;
- (d) D.C. amplifiers having a noise level (referred to the input circuit) of  $10^{-16}$  watts or less and/or a zero drift in 1 hour corresponding to a change in input power of  $10^{-16}$  watts or less;
- (e) Parametric amplifiers with a noise figure of merit of 5 decibels or less measured at a temperature of  $17^{\circ}\text{C}$ , and paramagnetic amplifiers; and specially designed parts therefor."

On the 17th November, this definition was finally accepted by all Delegations.

CONCLUSION: The COMMITTEE adopted the definition set out above.

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